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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/796,173

03/10/2004

Christian Dachauer

004640-044

3507

21839

7590

04/24/2006

BUCHANAN INGERSOLL PC  
(INCLUDING BURNS, DOANE, SWECKER & MATHIS)  
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EXAMINER

LU, JIPING

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/796,173	DACHAUER ET AL.	
	Examiner	Art Unit	
	Jiping Lu	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-25,27-29,31-39 and 41-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14,15,33-39 and 43 is/are allowed.
- 6) ☒ Claim(s) 1-13,16-25,27-29,31,32 and 41-42, 44-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date: _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____  | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 1-25, 27-29, 31-39 and 41-45 are pending. Claims 26, 30 and 40 are canceled.

#### ***Claim Rejections - 35 USC § 112***

2. Claims 44-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The claimed limitations in claims 44-45 are not supported by the originally filed specification. The disclosure and Figs. 2, 5c do not mention any sieve bottom surface of the first chamber accounts for 2/3 of the total sieve bottom surface of all chambers as claimed in claim 44 and absolute filling height of the fluidized granulate in the first chamber is greater than in each of the chambers downstream of the first chamber as claimed in claims 44-45.

#### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-13, 16-25, 27-29, 31, 41-42, 44 are rejected under 35 U.S.C. 103 as unpatentable over Petersen (U. S. Pat. 5,133,137) in view of Geissbuhler et al (DE 19500383 A1).

Petersen shows a fluidized bed continuous thermal treatment of granular bulk material same as the broad claims. Petersen's device includes a product inlet 12, 24, 25 in a first chamber 13, a product outlet 23 in the last chamber 14 downstream from the first chamber 13 and several fluidization chambers (at 14, 17, 55) with several gas permeable sieve bottom 16, 17. The gas 18, 19 is injected into respective chamber 13, 14, to fluidize the granulate and exited in a roof area 20 of the device. Adjacent chambers are separated by separating walls 15. The first chamber is larger than the other chambers. For claim 6, see openings 22. For claim 10, see 22a. However, the device of Petersen does not show a zigzag separator forming a roof of the chambers. Geiossbuhler et al. shows a zigzag separator 13 forming a roof of the chamber 1 between a surface of the fluidized layer and a fluidization gas vent 3 same as the applicant's. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the chambers of fluidized bed of Petersen with a zigzag separator roof as taught by Geissbuhler et al. in order to provide a serpentine path of granulate for better granulate separation and heat exchange. With regard to the claimed the granulate size, chamber shape, chamber volume, type of bulk material and area of the bottom surface of the first chamber, it would have been an obvious matter of design choice to design or choose the size of the granular particle and the shape and volume of the chambers and bottom surface of the first chamber with any desired size and shape and area in order to obtain the optimum result since applicant has not disclosed that the claimed size and shape and area solve any stated problem in a new or unexpected way or are for any particular purpose which are unobvious to one of ordinary skill in the art and it appears that the claimed features do not distinguish the invention over

Art Unit: 3749

similar features in the prior art . For claims 41-42, to use the device of Petersen for treating PET or polymer granulates is deemed to be an obvious matter of uses.

5. Claims 1-13, 16-25, 27-29, 31, 41-42, 44 are rejected under 35 U.S.C. 103 as unpatentable over Brassert et al. (U. S. Pat. 2,316,664) in view of Geissbuhler et al (DE 19500383 A1).

Brassert et al show a fluidized bed continuous thermal treatment of granular bulk material same as the broad claims. Brassert's device includes a product inlet 4 in a first chamber (between 132 and 102), a product outlet 72 in the last chamber (near 78) downstream from the first chamber and several fluidization chambers with several gas permeable sieve bottom. The gas 22 is injected into respective chambers to fluidize the granulate and exited in a roof area 60 of the device. Adjacent chambers are separated by separating walls 132. The first chamber is larger than the other chambers. However, the device of Brassert et al does not show a zigzag separator. Geiossbuhler et al. shows a zigzag separator 13 forming a roof of the chamber 1 between a surface of the fluidized layer and a fluidization gas vent 3 same as the applicant's. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the chambers of the fluidized bed of Brassert et al with a zigzag separator roof as taught by Geissbuhler et al. in order to provide a serpentine path of granulate for better granulate separation and heat exchange. With regard to the claimed the granulate size, chamber shape, chamber volume, type of bulk material and the area of the bottom surface of the first chamber, it would have been an obvious matter of design choice to design or choose the size of the granular particle and the shape and volume of the chambers and the area of the bottom surface of the first chamber with any desired size and shape and area in order to obtain the

Art Unit: 3749

optimum result since applicant has not disclosed that the claimed size and shape and area solve any stated problem in a new or unexpected way or are for any particular purpose which are unobvious to one of ordinary skill in the art and it appears that the claimed features do not distinguish the invention over similar features in the prior art . For claims 41-42, to use the device of Brassert et al. for treating PET or polymer granulate is deemed to be an obvious matter of uses.

6. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petersen (U. S. Pat. 5,133,137) or Brassert et al. (U. S. Pat. 2,316,664) in view of Geissbuhler et al (DE 19500383 A1) as applied to claim 1 as above, and further in view of Sanderson (U. S. Pat. 3,360,867).

The device of Petersen or Brassert et al. as modified by Geissbuhler et al. as above includes all that is recited in claim 32 except for the pivotable gate. Sanderson teaches a fluidized bed device with pivotable gate 40 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further provide the device of Petersen or Brassert et al. with a pivotable gate as taught by Sanderson in order to control the product discharge.

***Allowable Subject Matter***

7. Claims 14, 15 are allowed.

8. Claims 33-39, 43 are allowed because the references fail to suggest in combination with other limitations the method recited in claim 33 comprising providing a device comprising “a first chamber located farthest upstream, the first chamber occupying a large part of a total

volume of the chambers”. The references also fail to suggest additional features of the method recited in claim 33 that “the fluidization gas is injected into the first chamber at a higher pressure and/or at a higher gas speed than the fluidization gas is injected into the other chambers”.

### ***Response to Arguments***

9. Applicant's arguments filed 1/30/2006 have been fully considered but they are not persuasive to overcome the rejection. First, claims fail to structurally define over the prior art references. On pages 12-14 of the Remarks, the applicant argued that the prior art references do not show or teach the size of the first chamber occupying a major part (>50%) of the total volume of the plurality of chambers. The examiner disagrees because the various claimed the granulate size, chamber shape, chamber volume and type of bulk material were deemed to be an obvious matter of design choice in order to obtain the optimum result since applicant has not disclosed that the claimed size and shape solve any stated problem in a new or unexpected way or are for any particular purpose which are unobvious to one of ordinary skill in the art and it appears that the claimed features do not distinguish the invention over similar features in the prior art. On Page 18 of Remarks, the applicant also argued that claim 32 is also allowable for the reasons as stated for claim 1. Examiner disagrees because claim 1 is not allowable for the reasons as stated in the above rejections. On Page 19 of Remarks, the applicant argued that the new claims 44 and 45 are allowable. The examiner disagrees because the limitations in claims 44 and 45 are new matters that are not supported by the originally filed specification. Figures 2 and 5c also do not show the claimed limitations. It appears to be applicant's intention to rely on the various claimed dimension and sizes etc. for patentability. The applicant's is requested to

Art Unit: 3749

submit test report and supporting data to show the criticality of the various claimed dimension and sizes so that unexpected results over the prior art references can be produced and achieved. Otherwise, the various claimed numerical ranges are deemed to be obvious matter of design choice which produces no new or unexpected results over the prior art references.

### *Conclusion*

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

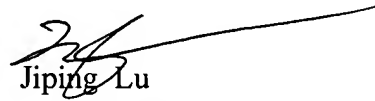
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EHUD GARTENBERG can be reached on 571 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jiping Lu  
Primary Examiner  
Art Unit 3749

J. L.